

**Land Reclamation Commission's Adopted Proposed Sand and Gravel Rules**  
May 22, 2003

Title 10—DEPARTMENT OF NATURAL RESOURCES  
Division 40—Land Reclamation Commission  
Chapter 10—Permit and Performance Requirements for Industrial Mineral Open Pit and In-Stream Sand and Gravel Operations

10 CSR 40-10.020 Permit Application Requirements

(D) A plan of operation and reclamation which meets the requirements of 444.760--444.790, RSMo.

1. The operation plan for surface mine operators shall include:
  - A. A brief description of topsoil availability, removal and storage as outlined in 10 CSR 40-10.050(6);
  - B. A brief description and location of spoil placement and disposal;
  - C. A brief description of handling of acid materials, if applicable; and
  - D. A brief description of the location and arrangement of the pit if not delineated clearly on the map submitted with the application.
2. All applications shall contain a reclamation and operation plan for the lands and water within the proposed permit area.
3. The reclamation plan shall include, at a minimum:
  - A. A list of species used for reclamation and the seeding/planting rates;
  - B. Methods and timing of seeding/planting;
  - C. If required by the commission, references to support revegetation methods;
  - D. A brief description of the grading, topsoiling and revegetation schedules as outlined in 10 CSR 40-10.050(10); and
  - E. The land use that area is to be reclaimed to and the acreage of each.
4. Commercial in-stream operators must describe what measures will be taken to minimize impacts on the stream environment, that is, how they will follow the requirements of 10 CSR 40-10.050(14).

10 CSR 40-10.050 Performance Requirements

(14) In-Stream Gravel Removal Requirements.

(A) Commercial operations that conduct sand and/or gravel removal within the stream banks must comply with the following requirements.

(B) The following requirements are designed to protect water quality while allowing for the excavation of sand and gravel from riparian environments. Upon request of the applicant, the program may establish site specific variances to address conditions that may occur at individual locations.

1. Excavation of sand or gravel deposits shall be limited to deposits in unconsolidated areas containing primarily smaller material (at least eighty-five percent (85%) of the material is less than three inches (3") in diameter) that is loosely packed and contains no woody perennial vegetation greater than one and one-half inches (1 1/2") in diameter, measured at breast height four and one-half feet (4.5').
2. An undisturbed buffer of 10-foot width shall be left between the excavation area and the water's edge of the flowing stream at the time of excavation. A buffer zone of adequate width to protect bank integrity should be left between the excavation area and the base of the high bank.
3. An undisturbed buffer of 25 feet wide shall be maintained in an undisturbed condition landward of the high bank for the length of the gravel removal site. Disturbed areas in this riparian zone shall be limited to maintained access road(s) for ingress and egress only. No clearing within this riparian area is authorized in association with work authorized by this permit.
4. Sand or gravel shall not be excavated below water elevation at the time of removal, except:
  - a. If the stream is dry at the time of excavation, excavation shall not occur deeper than the lowest undisturbed elevation of the stream bottom adjacent to the site. Upon request of the applicant, excavation depth restriction may be modified if the staff director determines that a variance would not significantly impact the stream resource.
  - b. For wet stream reaches, excavation depth restriction may be modified if it is determined by the staff director that a variance would not significantly impact the stream resource based on the presence of bedrock to prevent head cutting, excessive bedload, gravel rich areas or any other appropriate reason.
5. Stream channels shall not be relocated, straightened, cut-off, shortened, widened, or otherwise modified. A stream channel is defined as that area between the high banks of the creek where water is flowing, or in the case of a dry stream, where water would flow after a rain event.
6. Within thirty (30) days of the removal of excavation equipment from the site, streambank areas disturbed by the removal operation shall be revegetated or otherwise protected from erosion. For long-term operations (longer than thirty (30) days) or for sites that will be periodically revisited as gravel is deposited, access points shall be appropriately constructed and maintained such that stream banks and access roads are designed and constructed to minimize erosion.
7. Any aggregate, fines, or oversized material removed from the site shall be placed beyond the high bank, on a non-wetland site that has been approved by the landowner. No material,

including oversized material, that results from excavation activity may be stockpiled or otherwise placed into flowing water or placed against streambanks as bank stabilization unless specifically authorized by a state or federal permit.

8. All sand or gravel washing, gravel crushing, and gravel sorting shall be conducted beyond the high bank, in a non-wetland area and away from areas that frequently flood, such that gravel, silt, and wash water that is warm, stagnant, or contains silty material cannot enter the stream or any wetland.

9. Vehicles and other equipment shall be limited to removal sites and existing crossings. Water shall be crossed as perpendicular to the direction of the stream flow as possible.

10. Fuel, oil and other wastes and equipment containing such wastes shall not be stored or released at any location between the high banks or in a manner that would enter the stream channel. Such materials shall be disposed of at authorized locations.

(15) Outstanding Resource Waters (10 CSR 20-7.031)

(A) In-stream sand and gravel operations are prohibited from those waters listed as "Outstanding National Resource Waters."

(B) In-stream sand and gravel operations are prohibited from those segments of "Outstanding State Resource Waters" that are owned or managed by a state or federal agency.

(C) All other applications for in-stream sand and gravel operations on "Outstanding State Resource Waters" shall be reviewed individually to determine if specific conditions are necessary to preserve these stream reaches during mining activity. These individual reviews would assist the applicant in focusing on issues of specific concern. The individual review shall include a site visit by DNR staff prior to permit issuance, and annual site inspections by DNR staff during the life of the permit.

(16) The Land Reclamation Program shall consult with the appropriate agencies as to the presence of state and federal threatened and endangered species in the stream reach in order to avoid jeopardizing the species' continued existence or destroying or adversely modifying the habitat of such species.